

**WHAT IS CLAIMED IS:**

1           1.       A power saving apparatus in a power control system of a monitor, the power saving  
2 apparatus comprising:

3               a power supply unit which supplies power to each block of the monitor;

4               a signal sensor which senses a video synchronization signal input into the signal sensor and  
5 generates data based on an input state of the video synchronization signal;

6               a signal driver which converts a video signal into a display driving signal;

7               a display which displays the video signal, in response to the display driving signal, on a  
8 screen; and

9               a microprocessor which determines whether the monitor is in a power saving mode or a  
10 normal mode based on the data generated by the signal sensor, said microprocessor permitting the  
11 power to be supplied to said signal sensor, said signal driver and said display when it is determined  
12 that the monitor is in the normal mode, said microprocessor cutting off the power supplied from the  
13 power supply unit to said signal sensor, said signal driver and said display when it is determined that  
14 the monitor is in the power saving mode, said microprocessor permitting power to be resupplied to  
15 said signal sensor after a first predetermined time interval during said power saving mode.

1           2.       The power saving apparatus as set forth in claim 1, wherein said microprocessor  
2 permits the power to be resupplied to said signal sensor for a second predetermined time interval,  
3 during said power saving mode, and then again cuts off the power to said signal sensor, said first  
4 predetermined time interval being longer than said second predetermined time interval.

1           3.     The power saving apparatus as set forth in claim 2, wherein said microprocessor  
2 permits the power to be resupplied to said signal sensor, said signal driver and said display when it  
3 is determined that the monitor returns to the normal mode.

1           4.     The power saving apparatus as set forth in claim 1, further comprising a power  
2 switching unit interposed between power supply unit and said signal sensor, said signal driver and  
3 said display, said power switching unit being controlled by said microprocessor to control when the  
4 power is supplied from the power supply unit to said signal sensor, said signal driver and said  
5 display.

1           5.     The power saving apparatus as set forth in claim 4, wherein said microprocessor  
2 controls said power switching unit to permit the power to be resupplied to said signal sensor for a  
3 second predetermined time interval, during said power saving mode, and then again cuts off the  
4 power to said signal sensor, said first predetermined time interval being longer than said second  
5 predetermined time interval.

1           6.     The power saving apparatus as set forth in claim 5, wherein said microprocessor  
2 controls said power switching unit to permit the power to be resupplied to said signal sensor, said  
3 signal driver and said display when it is determined that the monitor returns to the normal mode.

1           7.     A method for controlling the power of a monitor, comprising the steps of:  
2 determining whether the monitor is in a power saving mode or a normal mode based on  
3 whether or not a video synchronization signal is received by a signal sensor;

4           permitting operational power to be supplied to said signal sensor when it is determined that  
5           said monitor is in the normal mode; and

6           intermittently cutting off and resupplying the operational power to a signal sensor, when it  
7           is determined that said monitor is in the power saving mode.

1           8.     The method as set forth in claim 7, wherein the operational power to said signal  
2           sensor is cut off for a first predetermined time period and resupplied for a second predetermined time  
3           period.

1           9.     The method as set forth in claim 8, wherein said first predetermined time period is  
2           longer than said second predetermined time period.

1           10.    A power saving apparatus in a power control system of a monitor, the power saving  
2           apparatus comprising:

3           a power supply unit which supplies power for each block of the monitor;

4           a signal sensor which senses a video synchronization signal input into the signal sensor and  
5           generates data based on an input state of the video synchronization signal;

6           a signal driver which converts a video signal into a display driving signal;

7           a display which displays the video signal, in response to the display driving signal, on a  
8           screen;

9           a power switching unit through which the power supplied by said power supply unit is  
10          selectively supplied to said signal sensor, said signal driver and said display; and

11          a microprocessor which determines whether the monitor is in a power saving mode or a

12 normal mode based on the data generated by the signal sensor, said microprocessor controlling said  
13 power switching unit to permit the power to be supplied to said signal sensor, said signal driver and  
14 said display when it is determined that the monitor is in the normal mode, said microprocessor  
15 controlling said power switching unit to cut off the power supplied to said signal sensor, said signal  
16 driver and said display when it is determined that the monitor is in the power saving mode, said  
17 microprocessor controlling said power switching unit to permit power to be resupplied to said signal  
18 sensor after a first predetermined time interval during said power saving mode.

1 11. The power saving apparatus as set forth in claim 10, wherein said microprocessor  
2 controls said power switching unit to permit the power to be resupplied to said signal sensor for a  
3 second predetermined time interval, during said power saving mode, and then again cuts off the  
4 power to said signal sensor, said first predetermined time interval being longer than said second  
5 predetermined time interval.

1 12. The power saving apparatus as set forth in claim 11, wherein said microprocessor  
2 controls said power switching unit to permit the power to be resupplied to said signal sensor, said  
3 signal driver and said display when it is determined that the monitor returns to the normal mode.